

MCBG Course Schedule At-a-Glance 2017

7/18/17

Month	Monday	Tuesday	Wednesday	Thursday	Friday	
July/ August	31 Distribute Handouts: 8:00-8:30 Intro to MCBG Simmons/Foreman: 8:30-9:00: Amino Acids, Peptides, & Proteins: Simmons: 9:00-10:30 SGPSS Orientation: 10:30-11:30 (SDLs)	1 SGPSS: 8:00-9:45 Recap: 9:45-10:30 3-D Structure of Proteins Simmons: 10:30-12:00	2 SGPSS: 8:00-9:45 Recap: 9:45-10:30 Protein Function Simmons: 10:30-12:00	3 SGPSS: 8:00-9:45 Recap: 9:45-10:30 Enzyme Kinetics Simmons: 10:30-12:00	4 SGPSS: 8:00-9:45 Recap: 9:45-10:30 Organization & Packaging of Chromosomes Zeleznik-Le: 10:30-12:00 Weekly Q & A - Rm. 360: (optional) 1:00-3:00	Q&A 1:00-3:00 Simmons
August	7 SGPSS: 8:00-9:45 Recap: 9:45-10:30 DNA Replication. Introduction to Mitosis Zeleznik-Le: 10:30-12:00	8 SGPSS: 8:00-9:45 Recap: 9:45-10:30 Recombinant DNA Techniques Foreman: 10:30-12:00	9 SGPSS: 8:00-9:45 Recap: 9:45-10:30 DNA Repair; Intro. to Meiosis Dingwall: 10:30-12:00	10 SGPSS: 8:00-9:45 Recap: 9:45-10:30 RNA Synthesis & Processing Foreman: 10:30-12:00	11 SGPSS: 8:00-9:45 Recap: 9:45-10:30 Protein Synthesis Foreman: 10:30-12:00 Weekly Q & A - Rm. 360: (optional) 1:00-3:30	Q&A 1:00-2:00 Zeleznik-Le 2:00-3:00 Foreman 3:00-3:30 Dingwall
August	14 Exam 1: 9:30-12:30	15 SGPSS: 8:00-9:45 Recap: 9:45-10:30 Gene Expression I Foreman: 10:30-12:00	16 SGPSS: 8:00-9:45 Recap: 9:45-10:30 Gene Expression II Foreman: 10:30-12:00	17 SGPSS: 8:00-9:45 Recap: 9:45-10:30 Posttranscriptional Gene Regulation Foreman: 10:30-12:00 Library lecture: (required) 1:00-2:00	18 SGPSS: 8:00-9:45 Recap: 9:45-10:30 Patterns of Single Gene Inheritance Le Poole: 10:30-12:00 Weekly Q & A - Rm 360 (optional) 12:30-2:30 (Family Weekend)	Q&A 12:30-2:30 Foreman
August	21 SGPSS: 8:00-9:45 Recap: 9:45-10:30 Cytogenetics Principles Zeleznik-Le: 10:30-12:00	22 SGPSS: 8:00-9:45 Recap: 9:45-10:30 Genetic Variations in Individuals and Populations Le Poole: 10:30-12:00	23 SGPSS: 8:00-9:45 Recap: 9:45-10:30 Genetics of Complex Diseases Zeleznik-Le: 10:30-12:00	24 SGPSS: 8:00-9:30 Recap: 9:30-10:00 Membrane Structure and Function Campbell: 10:00-11:30 (Mass of the Holy Spirit) 11:30	25 SGPSS: 8:00-9:45 Recap: 9:45-10:30 Electrical Properties of Membranes Campbell: 10:30-11:30 Weekly Q & A - Rm. 460: (optional) 1:00-3:30 Advanced Biochem.-360 (optional) 3:30-4:00	Q&A 1:00-2:00 Le Poole 2:00-2:30 Campbell 2:30-3:30 Zeleznik-Le Adv. Biochem 3:30-4:00 Zeleznik-Le
August/ September	28 Exam 2 9:30-12:30	29 SGPSS: 8:00-9:45 Recap: 9:45-10:30 Intracellular Compartments Gallagher: 10:30-12:00	30 SGPSS: 8:00-9:45 Recap: 9:45-10:30 Vesicular Trafficking Gallagher: 10:30-11:30	31 SGPSS: 8:00-9:45 Recap: 9:45-10:30 Lysosomes; Lysosomal Storage Diseases Gallagher: 10:30-11:30	1 SGPSS: 8:00-9:45 Recap: 9:45-10:30 The Cytoskeleton Denning: 10:30-12:00 Weekly Q & A- Rm. 360: (optional) 1:00-3:00	Q&A 1:00-1:30 Campbell 1:30-3:00 Gallagher
September	4 Labor Day (no classes)	5 Cell-Junctions, Cell Adhesion, Extracellular Matrix Denning: 10:00-11:30	6 SGPSS: 8:00-9:45 Recap: 9:45-10:30 Cell Signaling I&II Simmons 10:30-12:30	7 SGPSS: 8:00-9:45 Recap: 9:45-10:30 Cell Cycle and Growth Factor Signaling Osipo 10:30-12:00	8 Genetics Project (SDLs) 9:30-11:30 Weekly Q & A - Rm. 360: (optional) 1:00-3:00 Adv. Biochem. 360 (optional) 3:00-3:30	Q&A 1:00-2:00 Denning 2:00-3:00 Simmons Adv. Biochem. 3:00-3:30 Simmons
September	11 SGPSS: 8:00-9:45 Recap: 9:45-10:30 Cancer Genetics I&II Dingwall: 10:30-12:30	12 SGPSS: 8:00-9:45 Recap: 9:45-10:30 Cancer Epigenetics I&II Dingwall: 10:30-12:30	13	14 Weekly Q & A Rm 360 (optional) 9:30-12:00	15	Q&A 9:30-10:00 Osipo 10:00-12:00 Dingwall
September	18 Exam 3 9:30-12:30					

MOLECULAR CELL BIOLOGY & GENETICS – 2017

Course Description

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1. **OUTCOMES APPROACH TO ASSESSMENT AND COMPETENCY-BASED GOALS**

The first semester Molecular Cell Biology and Genetics course (MCBG) will help you to understand the fundamental molecular, cellular, and genetic processes common to all mammalian cells, with an emphasis on clinical relevance. The course will also involve you in Loyola's outcomes approach to assessment through its competency-based curriculum. The complete Loyola University Chicago **SSOM Competencies** and outcomes can be found on the MCBG Homepage under Administrative Resources, or at http://www.lumen.luc.edu/lumen/meded/ssom_competencies_4_13_15.pdf.

In MCBG, you will be evaluated in four of the eight SSOM competency goals. The course-specific **Goals and Objectives** can be found on the MCBG Homepage. When you successfully achieve the specific MCBG objectives for competency in 1) **Medical Knowledge** and 2) **Practice-based Learning and Improvement**, you will have the necessary skills and attitudes to build a personal framework for understanding the scientific basis of medicine. You will also be prepared to master key principles and concepts taught in subsequent medical school courses. When you achieve the specific MCBG objectives for competency in 3) **Interpersonal and Communication Skills** and 4) **Professionalism**, you will be prepared to work effectively with your peers in other medical school courses as well as in collaborative health care provider groups in a clinical setting. (See Section 10.)

2. OUTCOMES-BASED SELF-ASSESSMENT PLAN

To become a successful independent learner, it is important that you evaluate your current strengths and weaknesses and set goals for improving your knowledge and skills. This activity creates a learning cycle of

Plan→Do→Assess.



We have provided forms at the end of this Course Description to assist you in this process. These forms are also available on the Course Homepage. The first one is the Precourse Self-Assessment and Goal-Setting Form (Form 1). You should complete this form during orientation week and bring a copy to the first Small Group session to give to your faculty facilitators. In addition to self-assessment, this form will provide the faculty with information on your background knowledge, skills, and attitudes in the four core competencies related to the course. It will be used at your one-on-one meeting with your faculty facilitator(s) during Weeks 2-3.

You should reassess your goals at the end of Week 3 using the Midcourse Self Assessment Form (Form 2). You can discuss these goals or any issues related to Small Group with your facilitator(s) or with the course directors, Dr. Simmons and Dr. Foreman, at any time.

3. COURSE ORGANIZATION

The emphasis of the course will be on **student-centered** learning. The class will meet 3½-4 hours daily, five days a week. You will be assigned daily readings from the textbooks or occasionally from a journal article. In addition, you will be provided with lecture notes posted in the LUC-drop-box or attached to the Course Calendar. These files contain the reading assignment and a list of Key Concepts and Learning Objectives to guide your reading and studying, as well as figures and explanations from the lectures. The learning objectives tell you what you need to know, and will be especially useful for testing yourself in preparation for the exam. You will find it useful to print the lecture notes and bring them to class for note taking. These files, as well as lecture slides and video recordings of the lectures, will also be posted to the Course Calendar. A broader set of learning objectives, including ones for the Small Group Problem Solving Sessions, can be found on the MCBG Homepage under Course/Clerkship Information and “Session Objectives.”

Most class meetings will begin with a 1 hour-45 minute Small Group Problem Solving Session (SGPSS). Your small group will be given a problem set related to the material from the previous day’s lecture. This session gives you with the opportunity to integrate information and to apply your knowledge to analyze and solve problems. You will then assemble in the lecture hall (room 190) for an approximately half-hour recap session by the faculty member who authored the problem set. The recap will be followed by a 60, 90, or 120 min. lecture on new material.

To maximize your learning during lectures and SGPSS, you should review the lecture notes and read related information from the textbook assignment prior to each class meeting. By reviewing the notes and reading the textbooks, you will be able to anticipate topics to be covered in lecture. Consequently, you can pay particular attention to difficult concepts and ask specific questions. In addition, it is your professional obligation to come to the small group sessions prepared so that you can contribute intelligently to the conversation, and to the problem-solving process. Preparedness will be considered when evaluating your competency in professionalism.

Weekly Question and Answer (Q&A) Sessions are scheduled on Friday afternoons. These informal sessions will give you the opportunity for individualized interactions with faculty who have lectured during the previous week (Fri.-Thurs.). You can also address questions to faculty and to other students through the computer-based Sakai system, which can be accessed through the MCBG Homepage under Educational Recourses (see Section 12). Finally, you will participate in an independent research/learning activity called the Medical Genetics Project (see Section 9). You will do literature research on a specific genetic disease and then gather with other members of your small group in a special session on Sept. 8 to share the information that you found. In the last half of that session, you will give an informal presentation of your findings to another group. For those who would like to broaden their knowledge to include current research areas at Loyola, an optional lecture series called “Advanced Biochemistry for Fun” will take place in the afternoons of Aug. 25, Aug. 30 and Sept. 8. In this series, faculty members will present a short lecture on their research and its clinical relevance.

The course topics are organized into modules: Protein Structure and Function (July 31-Aug. 3), Molecular Biology (Aug. 4-17), Medical Genetics (Aug. 18-23), and Cell Biology (Aug. 24-Sept. 12).

There will be three exams in the course, which will consist of USMLE-like multiple choice questions. Exam 1 (Monday, Aug. 14) will cover lectures through Thurs., Aug. 10. Exam 2 (Monday, Aug. 28) will cover lectures from Aug. 11 through Thurs. Aug. 24. Exam 3 (Monday, Sept. 18) will cover lectures from Aug. 25 through Sept. 12. In addition, Exams 2 and 3 will contain some questions based on the previous exam material *in lieu* of a comprehensive final exam. The Medical Genetics Project will also contribute to the final grade.

4. COURSE GRADING

The final course grade will be based on assessment of both the **Medical Knowledge Competency** and **Practice-based Learning and Improvement Competency**.

Exams will be cumulative *in lieu* of a comprehensive final. The number of possible points will be approximately 204, divided as follows:

Exam 1:

~4 one-point multiple choice questions per lecture hour from July 31-Aug. 10: ≈ 54 pts

Exam 2:

- a) ~4 one-point multiple choice questions per lecture hour from Aug. 11-24;
- b) ~1 one-point multiple choice question per lecture hour from July 31-Aug. 10: ≈ 68 pts

Exam 3:

- a) ~4 one-point multiple choice questions for per lecture hour from Aug. 25-Sept. 12 (not Sept. 8);
- b) ~1 one-point multiple choice question per lecture hour from Aug. 11-Aug. 24; ≈ 74 pts

Medical Genetics Project:

Student-led discussion, abstract, and references 8 pts

Final grades will be determined from the percentage of the total points achieved:

Honors:	$\geq 92.0\%$
High Pass:	$\geq 84.5\%$ and $< 92.0\%$
Pass:	$\geq 69.5\%$ and $< 84.5\%$
Fail:	$< 69.5\%$

Students who fail will be assigned a “Does Not Meet Expectations” for the **Medical Knowledge Competency**. Students who pass but score less than 75% can be assigned a “Meets Expectations with Concern.” (See Section 10.)

The **Interpersonal and Communication Skills Competency**, the **Professionalism Competency** and the **Practice-Based Learning and Improvement** (Genetics Project) will be evaluated by the Small Group Facilitators and Course Directors using the criteria in **Form 4**. Facilitators will write a short narrative for each student in their groups and submit it to the Course Directors. This narrative will appear in the final grade report.

Remediation: Students who do not receive a passing grade in MCBG will be allowed to remediate the course during the following summer. Students will take three separate multiple choice exams that cover the same material as the three regular course exams. These exams will be spread out over the summer months, with the first one given during the first week of June. Students need to have a 70% average on the three exams to remediate the course. The grading system will show a P* grade, indicating that the pass grade was obtained by remediation. (The Academic Policy Manual states that a student with a failing grade below 60% may be denied the opportunity to remediate the failure by an end of year exam and may instead be required to repeat the course. The Course Director will make recommendations to the Student Promotion Committee to assist in determining if summer remediation is an option.)

5. IMPORTANT DATES

- July 31: First day of class. Bring a copy of completed **Form 1** to Small Group.
- Aug. 11: Deadline for signing up for required individual meetings with Small Group facilitators.
- Aug. 14: Exam 1
- Aug. 17: Special required lecture by the Librarians on doing medical literature searches (1:00).
- Aug. 21: Bring completed **Form 2** to Small Group.
Sign up for optional individual meetings with Small Group facilitators.
- Aug. 28: Exam 2
- Sept. 8: Small Group Medical Genetics Project discussion/presentation session. Turn in abstract and references to facilitators.
- Sept. 18: Exam 3

6. TEXTBOOKS AND LECTURE NOTES

Required:

Alberts, B. et al. (2015). **Molecular Biology of the Cell, 6th ed.** Garland Science, ISBN 978-0-8153-4432-2. Some copies are available in the library and the Academic Center for Excellence

A biochemistry textbook that is clinically oriented. Recommended options:

- Devlin, T. (2011). **Textbook of Biochemistry with Clinical Correlations**, 7th ed. Wiley Publications. ISBN 978-0-470-28173-4. (Used for the first week of lectures and for the metabolism section of the Function of the Human Body course.) (Reserve copies are available in the library.)
- Janson, J.W., & Tischler, M.E. (2012). **Medical Biochemistry: The Big Picture**. 1st ed. McGraw Hill. ISBN 978-0-07-163791-6. (Reserve copies are available in the library.)
- Meisenberg, G. & Simmons, W.H. (2017). **Principles of Medical Biochemistry**. 4th ed. Elsevier. ISBN 978-0-323-29616-8. (E-Book available through the library website.)

A medical genetics textbook. Recommended options:

- Nussbaum, R., McInnes, R.R., Willard, H.F. (2016). **Thompson and Thompson Genetics in Medicine, 8th ed.** Elsevier. ISBN 978-1-4377-0696-3. (Used in lecture.) (E-Book available for 7th and 8th editions through the library website.)
- Schaaf, C.P., Zschocke, J., Potocki, L. (2012). **Human Genetics: from Molecules to Medicine**, Lippincott. ISBN 10-1-6083-1671-8. (Well-illustrated, concise; good for the Genetics Project and board preparation.) (E-Book available through the library website.)

The course lecture notes (in LUC-drop-box and in the Course Calendar) for each day's session will consist of a list of Key Concepts and Learning Objectives and copies of most slides used in the lecture. The lecture notes will also contain brief discussions of material inadequately covered in the textbook. You should take notes on the assigned readings and in lecture using the learning objectives as a guide. At exam time, you will be expected to demonstrate understanding of all Key Concepts at the level indicated by the Learning Objectives. Therefore, testing yourself with the learning objectives is a good way to study for the exams. Note that the **Learning Objectives can be covered in one or more of the following: reading assignment, lecture/class discussion, or small group work.**

At the end of some of the lecture notes, there is a list of references for Further Reading. These articles will help you to 1) broaden your knowledge, or 2) go into more depth on key topics covered in the lecture. Many of the references deal with the clinical relevance of these topics. These articles will not be sources for exam questions.

7. ATTENDANCE

You are expected to attend all lectures, small group sessions, and recap sessions. This is especially important since Learning Objectives (and exam questions) may be covered in ANY of these sessions. During small group sessions, students work collaboratively to assist each other in learning. Therefore, **attending small group sessions is viewed as a professional obligation.** You should contact Student Affairs to obtain an excused absence (Dr. James Mendez or Beth Sonntag; 708-216-8140 or 216-8141, resp.) You should inform your fellow group members and facilitators in advance whenever possible. A pattern of unexcused absences will result in an unsatisfactory rating for **Professionalism**. Make-up examinations will be given only in cases of excused absence as outlined in Part I of the Academic Policy Manual.

8. LEARNING IN SMALL GROUPS

You will spend the first 1-hour-45 minutes of each day (starting at 8:00 A.M.) working on problems in a small group of five students. Your group will meet in the assigned Learning Cluster room (see below) along with three other groups. There will be three faculty facilitators assigned to the room. Two facilitators will be in the room on any given day (see Section 16).

Groups 1,2,3,4	Room 340	Groups 17,18,19,20	Room 440
Groups 5,6,7,8	Room 350	Groups 21,22,23,24	Room 450
Groups 9,10,11,12	Room 370	Groups 25,26,27,28	Room 470
Groups 13,14,15,16	Room 380	Groups 29,30,31,32	Room 480

You should report to your room at the scheduled time, assemble your group, and receive a problem set from the faculty facilitators. Consistent with the student-centered philosophy of this course, the facilitators will monitor the groups and assist them in the discussion *process*, but will not function as content experts. Facilitators will not lecture. They may answer questions at their discretion, but are normally asked to respond to a question with another question, or to direct students to raise the issue during the “recap session” that follows. Each group will have a flipchart and markers to review concepts from lecture, summarize problem-set data, brainstorm, etc. Using the flipchart as a visual aid can greatly enhance learning in the small group sessions. It will also help the group to focus on a common concept or an idea posited by a group member. Enlarged versions of problem-set figures or tables will be provided that can be pasted on the flipchart for the whole group to focus on. If the group has a question that can't be answered by its members with the assistance of the facilitator, the question can be written down on a note card that is provided daily and handed to the lecturer at the recap session.

A combination of good communication and problem-solving skills, a lively curiosity, and preparation (by reading through the handouts and related textbook material, and actively listening to lectures) will assure that one of the goals of small group sessions is met, namely that you achieve a deeper understanding of concepts by applying your knowledge in novel contexts. A successful small group has members who have a combination of interpersonal skills including the ability to listen, to pose questions, and to communicate ideas effectively both orally and in writing (e.g., at the flipchart). Importantly, they have respect for one another and the desire to include everyone in the discussion. Group members and facilitators will use the Small Group Assessment Forms (Forms 3 and 4) regularly to provide feedback to individuals and the group to assist in developing these skills and behaviors (Sections 17). Following the small group session, the class will reassemble in the lecture room for a "recap session" where the faculty member who authored the problem set will discuss the problems/answers and answer student questions.

At the end of the course, the faculty facilitators will provide a summative evaluation of your competency in **Interpersonal and Communication Skills, Learning and Improvement**, and **Professionalism** based on your performance in Small Group, and using the criteria listed in **Form 4**. They will also provide feedback to the Course Directors on your performance in the Medical Genetics Project presentation (Section 9).

9. MEDICAL GENETICS PROJECT

Overview

The Medical Genetics Project is a small group exercise. You and your group will research information about a specific genetic disease that your group finds interesting. At a **special Small Group Genetics Project session on Sept. 8**, you will discuss your findings with your group mates, organize everyone's information, and then give an informal presentation on your disease to another group. This project has several goals. It will give you an opportunity to further develop your ability to search for, and critically evaluate, scientific evidence related to the principles and concepts covered in the course. **This training is required by the medical school accrediting agency.** There is now a vast array of powerful technologies and databases that are specific for medicine and basic medical sciences. These resources require significant practice to locate and use. The project will also add to your knowledge about a specific genetic disorder, and illustrate important principles in human genetics, patient care, and societal issues. Finally, this project will give you the opportunity to practice teaching difficult medical concepts to your peers, and ultimately to patients.

Assignments

The assignments for the Genetics Projects are spread throughout the course. **During the first two weeks of class**, your group needs to **choose a genetic disease** to study. You can find diseases in the recommended genetics textbooks for the course or on the Health Sciences Library's toolkit, <http://hslguides.luc.edu/c.php?g=318949>. A disease that has a known genetic risk factor (e.g., a particular type of cancer) is also an appropriate choice. You should make sure that your group covers several of the following topics (which overlap somewhat): **disease etiology** (cause), **pathogenesis** (the mechanisms involved in the development of the morbid conditions of the disease), **phenotype** (observable morphological, biochemical, and physiological characteristics of the individual, determined by a combination of genotype and environment), **natural history** (how the characteristics of the disease develop over time without treatment), **management** (set of activities aimed at improving the health and clinical outcomes of a patient with a chronic disease, including self-management), **inheritance risk**, and **family, social, legal, and ethical issues** that relate to the specific disorder. While you can divide up the topics among group members, **everyone should have a clear understanding of the disease etiology and mode of inheritance.**

The second responsibility is to **attend a required lecture by the Librarians on Thursday, Aug. 17** at 1:00-2:00 in Tobin Hall (190). **Bring your laptop computer.** The Librarians will show you how to do a search of the National Library of Medicine "Medline" database using the PubMed search engine. **Each student** will then do a preliminary search for publications related to their chosen genetic disease and **subtopic**. It is important to do this as soon as possible so that your group can change diseases if you find that there is minimal information about your first choice. You can subsequently expand your search to include information in books, reviews, and websites of NIH, scientific societies, or patient advocacy groups. Make sure that your sources are reliable, i.e., authored by experts and free of conflicts of interest.

Come prepared to discuss your findings with your group members during the first hour of the Sept. 8 special Genetics Project session. To enhance your teaching effort, you should be prepared to use the flipchart to explain concepts. You can also bring other visual aids. During this first hour, organize the information that you have into a logical presentation sequence. Then get together with another group and educate them about your disease. They will reciprocate.

At the end of the Genetics Project session, each student should also turn in the following materials:

1. **A written abstract of your subtopic** (no longer than a third of a page).
2. *In lieu* of a formal bibliography, identify 3-4 of your most important references and then **print out the first page of each article or do a screen print of a website.**

Put your name and group number at the top of each page. Gather the pages from your group mates, staple them together, and hand them in to the facilitators at the end of the session. These pages will provide the course directors with some evidence that you did an independent and appropriate literature research.

Grading

The genetics project will be worth 8 points toward your final course grade (4%). The grade will be based mostly on your preparation for and participation in the Genetics Project session, as evaluated by the Small Group facilitators. The course directors will also evaluate your abstract and the appropriateness of your submitted references. It is expected that all students will get the full 8 points. **Facilitators will recommend a lower grade for students who obviously did not adequately prepare or did not participate significantly in the discussion.**

Satisfactory completion of the Medical Genetics Project will also be considered in the facilitator's written narrative at the end of the course. A "Meets Expectations" will also be entered into the Patient-based Learning and Improvement competency.

10. EXAMS AND EVALUATION FORMS: Outcomes-Based Assessment of Competency Goals.

Medical knowledge will be evaluated by USMLE- type multiple-choice questions. **The testing procedures resemble those of the USMLE and have been adopted by all courses at the medical school.** Examinations will be administered by computer. Students are not permitted to ask questions during exams. Students who are suspected of cheating at any time during an exam will be asked to leave the examination room and will receive a failure on that exam. Such matters will be handled in accordance with procedures established by the Medical School Council. The final course grade (Honors, High Pass, Pass, Fail) will be based on these exams of medical knowledge as well as on the Learning and Improvement component of the Medical Genetics Project as discussed above. Course failures will be treated in accordance with Part I of the Academic Policy Manual.

The evaluation of the four core competencies covered in this course will be reported in the Student Grading System. The level of competency will be designated by "Meets Expectations", "Meets Expectations with Concerns", or "Does Not Meet Expectations". Any grade of "Does Not Meet Expectations" or "Meets Expectations with Concerns" will be accompanied by a comment specifying what generated the concern and what needs improvement. **These competency grades will be part of your record at Loyola, and will be reported to Faculty committees on promotion and remediation, which track the progress of individual students throughout all four years of the curriculum.** Students who do not remediate a "Does Not Meet Expectations" or who have accumulated multiple "Meets with Concerns" in a given competency by the end of the year 2 can be prevented from proceeding to year 3. The evaluation of competency outcomes has become a feature of undergraduate and graduate (residency) medical education throughout the United States, and is not unique to MCBG or Loyola.

11. TUTORING, LEARNING ASSISTANCE, AND COMPUTER LAB

It is the faculty's goal that all students successfully complete this course. In addition to the weekly Question and Answer sessions, the faculty will provide individual assistance to any student requesting it. If you need assistance, consult Sections 13-14 below for faculty office locations, telephone numbers, and e-mail addresses. Learning assistance is also available at the Academic Center for Excellence (ACE) in Room 255. Contact Tina Calcagno (tcalcagno@luc.edu) 6-8166 for an appointment. The Director, Dr. Josh Hopps (6-5447; jhopps@luc.edu) or the Academic Support Advisor, Vera Schalansky, JD (6-4997; vschalansky@luc.edu) can provide help in such areas as test-taking skills, note-taking and study skills, managing stress, and managing time. Many of your classmates will take advantage of these resources, so you should not hesitate to seek assistance. Their office can also provide tutors for students who need additional help. All students are urged to consult the ACE website through the MCBG Homepage under Educational Resources for a listing of services and scheduled workshops that are offered to students.

12. SAKAI: STUDENT / FACULTY ONLINE DISCUSSION

Sakai will be used in MCBG as an online discussion site for the posting of students' questions and faculty responses. Sakai can be accessed through the MCBG Homepage under Educational Resources using your Loyola username and password. Students may post questions at any time. Faculty will check this online discussion daily and will post responses on the same or next day. In addition, faculty may post other information such as short videos, animations, etc., that will enhance student understanding of lecture concepts. Students can also respond to other students' questions and faculty postings. We hope this discussion will bring the faculty and students together into an interactive learning community to enhance our collective understanding of the Key Concepts in this course. Sakai is preferred over direct e-mails to faculty since the questions and answers are available to all students. If your question is not being answered, it is appropriate to send an e-mail notice to the faculty member to check Sakai.

13. FACULTY: COURSE LECTURERS

Edward Campbell, Ph.D., CTRE, Rm. 226, X6-3913, ecampbell@luc.edu

Mitchell Denning, Ph.D., Cancer Ctr., Rm 237, X7-3358, mdennin@luc.edu

Andrew Dingwall, Ph.D., Cancer Ctr., Rm. 334, X7-3141, adingwall@luc.edu

Kimberly Foreman, Ph.D., **ASST. COURSE DIRECTOR**, Cancer Ctr., room 235, X7-3320, kforema@luc.edu

Thomas Gallagher, Ph.D., CTRE, Rm. 234, X6-4850, tgagal@luc.edu

Caroline Le Poole, Ph.D., Northwestern Univ., caroline.lepoole@northwestern.edu

Clodia Osipo, Ph.D., Cancer Ctr., Rm. 238, X7-2372, cosipo@luc.edu

William Simmons, **COURSE DIRECTOR**, Ph.D., CTRE, Rm. 436, X6-3362, wsimmon@luc.edu

Nancy Zeleznik-Le, Ph.D., Cancer Ctr., room 337, X7-3368, nzelezn@luc.edu

14. FACULTY: SMALL GROUP FACILITATORS

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15. COURSE STAFF

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16. SMALL GROUP PROBLEM-SOLVING SESSIONS: ROOMS AND FACILITATORS

Room 340 – William Simmons, Ph.D.; Phong Le, Ph.D.; Karen Visick, Ph.D.
Groups 1,2,3,4

Room 350 – Kimberly Foreman, Ph.D.; Thomas Gallagher, Ph.D.; Joanna Bakowska, Ph.D.
Groups 5,6,7,8

Room 370 – Kuzhali Muthumalaiappan, Ph.D.; Andrew Dingwall, Ph.D.; Francis Alonzo, Ph.D.
Groups 9,10,11,12

Room 380 – Maurizio Bocchetta, Ph.D.; Evan Stubbs, Ph.D.; Mashkooor Choudhry, Ph.D.
Groups 13,14,15,16,

Room 440 – Neil Clipstone, Ph.D.; George Battaglia, Ph.D.; Stephanie Watkins, Ph.D.
Groups 17,18,19,20

Room 450 – Nancy Zeleznik-Le, Ph.D.; Walter Jeske, Ph.D.; Mitchell Denning, Ph.D.
Groups 21,22,23,24

Room 470 – Clodia Osipo, Ph.D.; Matthias Majetschak, M.D.,Ph.D.; John Callaci, Ph.D.
Groups 25,26,27,28

Room 480 – Edward Campbell, Ph.D.; Monsheel Sodhi, Ph.D.; Herbert Mathews, Ph.D.
Groups 29,30,31,32,

17. SUMMARY OF ASSESSMENT FORMS.

(These are included at the end of this Course Description, and are also available online in LUMEN.)

Form 1: Precourse Self-assessment and Goal Setting: to be completed by each student and turned in to the faculty facilitators at the orientation Small Group Problem Solving Session on July 31. This form will be discussed at the one-on-one meeting with your facilitators during weeks 2-3.

Form 2: Midcourse Self-assessment: to be completed by each student and turned in to the faculty facilitators on Aug. 21. This form may be discussed at your optional one-on-one meetings with your facilitators during week 4.

Form 3: Small Group Assessment, Student Version.

Form 4: Small Group Assessment, Facilitator Version.

There are two Small Group Assessment Forms, a student version and a facilitator version. Both forms assess interpersonal and communication skills, learning and improvement, and professionalism. The student version (Form 3) describes the specific behaviors that individual members of a successful small group are likely to display. Individual students will use this form to self-assess, and to assess their group and their peers. The facilitator version Form 4 lists the criteria that faculty will use to evaluate students in the final narrative report. The form will also be used to identify specific problems that interfere with good group dynamics. It is expected that these problems will disappear as the course progresses. Facilitators will meet individually with each student in their small groups during Week 2-3 and, optionally, during week 4 of the course to give personal formative feedback.

FORM 1**PRECOURSE SELF-ASSESSMENT AND GOAL SETTING**

After completing this page, make a copy and give it to your small group facilitators on July 31, 2017.

Your Name: _____

Undergraduate College: _____

Year of Graduation: _____ Major(s): _____

Post-bac studies: _____

- A. **Self Assessment:** Using the definitions below, indicate your current level of understanding (proficiency) for each of the 5 broad Medical Knowledge topics covered in MCBG (see Course Description) by placing an "X" in the appropriate box.

Definitions:

Novice - little or no exposure to terminology or content knowledge in this area;

Advanced Beginner - knowledge of terminology and basic concepts; can solve problems with help from source books; beginning to search for underlying reasons; uncertain when explaining basic concepts to others;

Competent - significant experience applying knowledge to solve common problems and analyze data without help from source books; requires consultation for complicated problems; generally able to explain basic concepts to others;

Proficient - able to apply knowledge to solve problems and analyze data in unfamiliar contexts; acts as consultant to others.

Level	Protein Structure & Function	Molecular Biology	Medical Genetics	Cell Biology
Novice				
Adv. Beg.				
Competent				
Proficient				

- B. Please describe your past learning and experience related to these content areas.

C. Please describe any training and/or significant experience related to Interpersonal and Communication Skills, Professionalism, and Lifelong Learning/Problem Solving you have had.

D. Please describe **YOUR goals and expectations at this time** for each of the **4 Competency Goals** for this course.

1. Medical Knowledge:

2. Interpersonal and Communication Skills

3. Professionalism, Moral Reasoning, and Ethical Judgment

4. Lifelong Learning, Problem-solving, and Personal Growth

FORM 2

MIDCOURSE SELF-ASSESSMENT

After completing this page, make a copy and give it to your small group faculty facilitator by August 21, 2017. Optional feedback sessions will take place August 21 – 25, 2017.

STUDENT: _____

Write a short paragraph addressing the following questions:

1. Please review the goals and expectations you wrote in the precourse self-assessment for the 4 competencies that are evaluated for this course. What have you done to achieve your goals and expectations for this course? Are you achieving your goals and expectations for this course? Why or why not?

2. If you wish to revise your goals and/or expectations, please describe them in a short paragraph.

3. What do you plan to do in order to better meet your goals and expectations for this course?

FORM 3**SMALL GROUP ASSESSMENT****STUDENT VERSION**

STUDENT (and GROUP #) being assessed: _____

DATE: _____ ASSESSOR: (self?) _____

Instructions:

Ongoing feedback: Evaluate yourself, another group member, or your group as a whole by using the criteria listed in the table. This form can be used for daily or weekly feedback on group dynamics. This student version of the form differs from that used by faculty facilitators in that it attempts to make explicit the kinds of behaviors that individual members of a successful small group are likely to display. Part I of the form identifies activities that are likely to promote a successful solution to the problem that the group is addressing. They are listed in the approximate order in which the activities should occur. Part II identifies non-verbal communication skills and behaviors that contribute to a successful small group and that are likely to maximize the satisfaction of individual group members. Circle the number to the right of each outcome objective that best represents your judgment for the activity described.

3 = Observed to a significant extent; at or above expected level (corresponds to 'meets expectations').

2 = Observed to a moderate extent; expected behavior inconsistently demonstrated (corresponds to 'meets expectations with concerns').

1 = Observed to a small extent; needs improvement (corresponds to 'does not meet expectations').

Part 1. Communication and Problem Solving

COMMUNICATION (Opening)		
Greeting:		
• Acknowledges each group member at the beginning of the session in a positive manner	1	2 3
Calibration:		
• Brief chat with other group members to assess potential barriers to communication (e.g., no sleep, illness, not prepared, etc.)	1	2 3
COMMUNICATION (Gathering information)		
Goal Setting:		
• Reads problem before beginning	1	2 3
• Discusses problem-solving goals and priorities	1	2 3
Questioning:		
• Starts with open-ended question to review relevant information (e.g., Can we review topic A because it seems relevant to this problem?)	1	2 3
• Progresses to focused questions to request specific information pertaining to the problem (e.g., Can anyone define the term ----- in this problem? or How do we interpret this figure?)	1	2 3
COMMUNICATION (Achieving a solution)		
Problem Content:		
• Explicitly assures that everyone has the same understanding of terms and concepts	1	2 3
• Identifies pertinent data to be analyzed	1	2 3
Knowledge:		
• Acknowledges opinion versus fact	1	2 3
Process:		
• Attempts to obtain information/opinions from all group members	1	2 3
• Restates others' comments to clarify and/or indicate understanding	1	2 3
• Uses flip chart for diagrams, lists, etc., to keep process group-centered	1	2 3
• Avoids side discussions with other group members	1	2 3
• Encourages group to reach agreement by consensus	1	2 3

Part 2. Skills and Behaviors

COMMUNICATION SKILLS (Non-verbal)			
Eye Contact:			
<ul style="list-style-type: none"> • <i>Uses eye contact to convey interest and attentiveness</i> 	1	2	3
Body Language:			
<ul style="list-style-type: none"> • <i>Uses posture (upright), gestures (e.g. nodding) and sounds (e.g. "mmhmm") to convey interest, understanding, and encouragement</i> 	1	2	3
Silences:			
<ul style="list-style-type: none"> • <i>Pauses (three or more seconds) to give others a chance to speak</i> 	1	2	3
<ul style="list-style-type: none"> • <i>Refrains from interrupting others</i> 	1	2	3
RELATIONSHIP SKILLS:			
Respect:			
<ul style="list-style-type: none"> • <i>Open and honest about own strengths and weaknesses (knowledge, skills, attitudes)</i> 	1	2	3
<ul style="list-style-type: none"> • <i>Values others by acknowledging their efforts and contributions</i> 	1	2	3
<ul style="list-style-type: none"> • <i>Respectful of others' opinions and point of view</i> 	1	2	3
Partnership:			
<ul style="list-style-type: none"> • <i>Willingness to be helpful and work together</i> 	1	2	3
GROUP SKILLS			
Ground Rules:			
<ul style="list-style-type: none"> • <i>Refers to ground rules to guide individual and group behavior</i> 	1	2	3
Evaluation:			
<ul style="list-style-type: none"> • <i>Promotes and participates in regular group evaluation. ("How effective was our problem-solving process.?" "Did we address all the issues relevant to the problems?" "Where can we improve?" NOT "Were the problems solved?")</i> 	1	2	3
<ul style="list-style-type: none"> • <i>Participates in the evaluation of individual group members in a constructive and respectful manner</i> 	1	2	3
Conflict Resolution:			
<ul style="list-style-type: none"> • <i>Identifies areas of conflict and initiates strategies (discussion, resources, etc.) for resolving disputes in a timely manner</i> 	1	2	3
PROFESSIONALISM			
Demeanor:			
<ul style="list-style-type: none"> • <i>Conduct and dress is appropriate for the learning situation and does not distract from the group work</i> 	1	2	3
Conduct:			
<ul style="list-style-type: none"> • <i>Punctuality (arrives promptly, avoids keeping group waiting); explains lateness or absence; informs group of known future absences</i> 	1	2	3
<ul style="list-style-type: none"> • <i>Honesty (admits errors, acknowledges any weaknesses or lack of preparation)</i> 	1	2	3
Preparation:			
<ul style="list-style-type: none"> • <i>Prepares for SG PSS by reading, attending lectures, and preparing learning objectives</i> 	1	2	3
PERSONAL DEVELOPMENT			
<ul style="list-style-type: none"> • <i>Evaluates own performance in small group</i> 	1	2	3
<ul style="list-style-type: none"> • <i>Evaluates own performance in MCBG, sets goals, and devises strategies to achieve them</i> 	1	2	3

COMMENTS: STUDENTS: If using this form to self-assess, write what you think you do well and what you'd like to improve. Share this with your group members. If assessing another group member, write what you think that person does well and what they could improve (be specific). Share this assessment with the other group members.

Positive Attributes**Interpersonal and Communication Skills:**

- Actively participates in small group discussions
- Actively listens to groupmates and acknowledges their contributions
- Uses the flipchart to provide a visual aid for learning
- Keeps the discussion group-centered
- Ensures that everyone has an understanding of terms and concepts
- Contributes to reaching an agreement by consensus
- Provides constructive, nonthreatening verbal feedback to others

Learning and Improvement:

- Acknowledges weaknesses; makes a learning plan and seeks assistance

Professionalism:

- Behaves in a professional, courteous, and respectful manner
- Prepares daily for small group sessions
- Arrives to small group on time
- Completes course requirements in a timely manner
- Honestly admits errors or weaknesses
- Obeys Group Ground Rules
- Helps to resolve any conflicts in a timely manner

Negative Attributes

- Appears not to be prepared for small group
- Tends to dominate the discussion
- Contributes little to the discussion
- Fails to use the flipchart
- Frequently interrupts others
- Fails to acknowledge or respect others' opinions
- Fails to be group-centered (excessive side-conversations or distractions)